

Amended Claims.

Claim 108-127. (canceled)

Claim 128. (original) bioresorbable implant composition, comprising:

a calcium phosphate; and

an agent which directly or indirectly stimulates osteoclast activity, wherein the agent recognizes the calcium phosphate as a substrate to thereby modulate the resorption of the calcium phosphate at an implant site.

Claim 129. (canceled)

Claim 130. (new) The implant composition of claim 128 wherein the agent is selected from the group consisting of interleukin-1, colony stimulating factors, macrophage-colony stimulating factors, transforming growth factor α , tumor necrosis factor, interleukin-6, interleukin-11, interleukin-3, para-thyroid hormone, vitamin D metabolites, prostaglandins, and oxygen free radicals.

Claim 131. (new) The implant composition of claim 128 further comprising at least one bone-resorbing cell.

Claim 132. (new) The implant composition of claim 128 wherein the at least one bone-resorbing cell is selected from the group consisting of osteoclasts, and macrophages.

Claim 133. (new) The implant composition of claim 129 further comprising a biologically active agent.

Claim 134. (new) The implant composition of claim 133 wherein the biologically active agent is selected from the group consisting of proteins, polypeptides, polynucleotides, nucleoproteins, polysaccharides, glycoproteins, and lipoproteins.

Claim 135. (new) The implant composition of claim 133 wherein the biologically active agent is selected from the group consisting of anti-AIDS substances, anti-cancer substances, antibiotics, ACE inhibitors, adrenergic antagonists, antacids, immunosuppressants, anti-viral

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substances, enzyme inhibitors, neurotoxins, opioids, hypnotics, antihistamines, lubricants, tranquilizers, anti-convulsants, muscle relaxants, anti-Parkinson substances, anti-spasmodics, muscle contractants, anti-diarrheals, anti-emetics, laxatives, diuretics, miotics, anti-cholinergics, anti-glaucoma compounds, anti-parasite compounds, anti-protozoal compounds, anti-hypertensives, analgesics, anti-pyretics, anti-inflammatory agents, anti-histamines, anti-tussive agents, anti-vertigo, antinertigic, anti-motion sickness medications, local anesthetics, ophthalmics, prostaglandins, anti-depressants, anti-psychotic substances, anti-emetics, imaging agents, specific targeting agents, trophic factors, growth factors, neurotransmitters, cell response modifiers, and vaccines.

Claim 136. (new) The implant composition of claim 128 wherein the calcium phosphate comprises a powder mixture of:

an amorphous calcium phosphate having a calcium to phosphate ratio (Ca:P) of 1.1:1.0 to 1.9:1.0; and

a calcium phosphate promoter selected to promote conversion of the amorphous calcium phosphate into a bioresorbable poorly crystalline apatitic (PCA) calcium phosphate.

Claim 137. (new) The implant composition of claim 136 further comprising:


a physiologically acceptable aqueous solution in an amount sufficient to hydrate the calcium phosphate and to form a calcium phosphate paste or putty.

Claim 138. (new) The implant composition of claim 137 wherein the physiologically acceptable aqueous solution is selected from the group of water, buffered pH solution, saline solution, serum and tissue culture medium.

Claim 139. (new) The implant composition of claim 136 wherein the calcium phosphate promoter comprises an acidic calcium phosphate.

Claim 140. (new) The implant composition of claim 139 wherein the acidic calcium is selected from the group of calcium metaphosphate, dicalcium phosphate dihydrate, heptacalcium decaphosphate, tricalcium phosphate, calcium pyrophosphate dihydrate, crystalline

hydroxyapatite, calcium pyrophosphate, monetite, octacalcium phosphate, and poorly crystalline apatitic (PCA) calcium phosphate.

 Claim 141. (new) The implant composition of claim 128 wherein the overall calcium to phosphate ratio (Ca:P) of the calcium phosphate is less than 1.5:1.0.

Claim 142. (new) The implant composition of claim 136 wherein the amorphous calcium phosphate and the calcium phosphate promoter are present in about equal amounts by weight.

Claim 143. (new) The implant composition of claim 136 wherein the calcium phosphate promoter comprises dicalcium phosphate dihydrate (DCPD).

The amendments to the claims find support throughout the application, in particular on pages 55-58 of the specification and in the claims as originally filed. It is submitted that no new matter has been added. If the Examiner believes that any further discussion of this communication would be helpful, he is encouraged to contact the undersigned by telephone.

A Petition for Extension of Time accompanies this Response To Restriction Requirement And Preliminary Amendment. Please apply any additional charges, or credit any overpayment, to our Deposit Account No. 08-0219.

Respectfully submitted,

Date: 5/27/03


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